Application No.: 09/522,178

Amendment dated April 22, 2005

Reply to Office Action of January 25, 2005

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AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) An active noise control circuit comprising:

feed-forward control means for being supplied with a reference signal highly

correlated to noise from a noise source and generating a noise cancellation signal which is

out of phase to noise in the passenger compartment of a vehicle with a fixed roof;

canceling sound generating means disposed in the passenger compartment for

generating a noise canceling sound in response to the noise cancellation signal from said

feed-forward control means;

a microphone disposed in the passenger compartment of the vehicle with the fixed

roof, the microphone being centrally located in the width direction of the fixed roof of the

vehicle and at an antinode of an acoustic normal mode of the passenger compartment, for

detecting and canceling said noise of which sound pressure level is high, and for generating

an output signal as the reference signal; and

a noise cancellation-confirming microphone for confirming cancellation of the noise

in the passenger compartment, and for generating an error signal;

wherein said feed-forward control means comprises means for lowering the levels of

output signals said error signal from said noise cancellation-confirming microphone with the

noise cancellation signal; and

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wherein said noise cancellation-confirming microphone is positioned in a vicinity of

ears of occupants seated in the passenger compartment.

2. (Original) An active noise control circuit according to claim 1, wherein said

antinode of the acoustic normal mode of the passenger compartment comprises an antinode

in a primary mode or a secondary mode in a longitudinal direction of the passenger

compartment.

3. (Previously Presented) An active noise control circuit according to claim 1,

wherein said noise cancellation-confirming microphone comprises

a plurality of noise cancellation-confirming microphones being positioned

respectively near laterally spaced roof rails of the vehicle in confronting relationship to the

ears of occupants seated in the passenger compartment.

4. (Previously Presented) An active noise control circuit according to claim 1,

wherein said noise cancellation-confirming microphone is positioned substantially centrally

between laterally spaced roof rails of the vehicle in confronting relationship to the ear on the

compartment side of an occupant seated in the passenger compartment.

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5. (Original) An active noise control system according to claim 3 or 4, further

comprising a microphone disposed near a central console in the passenger compartment.

6. (Currently Amended) An active noise control system comprising:

a microphone positioned in the passenger compartment of a vehicle having a fixed

roof, the microphone being centrally located in the width direction of-a-the fixed roof of the

vehicle and at an antinode of a primary or secondary acoustic normal mode of the passenger

compartment of the vehicle for detecting and canceling said noise of which sound pressure

level is high;

canceling sound generating means disposed in the passenger compartment for

generating a noise canceling sound;

a feedback control circuit for being supplied with an output signal from said

microphone and generating an output signal to energize said canceling sound generating

means; and

a storage box;

wherein said microphone and said feedback control circuit are housed together in said

storage box, said feedback control circuit having an adjusting circuit for adjusting the

amplitude and phase between a canceling sound generating means and the microphone,

based on a transfer characteristic from said microphone, to generate a noise cancellation

signal which is of the same sound pressure as, but out of phase to, noise at the microphone.

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7. (Cancelled)

8. (Cancelled)

9. (Previously Presented) An active noise control system according to claim 6, wherein

said storage box is disposed beneath a front seat in the passenger compartment.

10. (Previously Presented) An active noise control system according to claim 6,

wherein said storage box has holes defined therein for the passage of noise in the passenger

compartment.

11. (Previously Presented) The active noise control system according to claim 1,

wherein frequency of said noise ranges from 20 to 120Hz.

12. (Previously Presented) The active noise control system according to claim 6,

wherein frequency of said noise ranges from 20 to 120Hz.

13. (New) The active noise control system according to claim 1, wherein frequency of

said noise ranges from 40 to 80Hz.

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14. (New) The active noise control system according to claim 6, wherein frequency of said noise ranges from 40 to 80Hz.